

**IN THE CLAIMS:**

Please cancel claims 2, 3, 7-10, and 20-25 without prejudice or disclaimer,  
and amend claims 1, 4, 5, 8, 9, 11-14, 17, and 18 as follows:

1 1. (Twice Amended). [In a] A thermal control device[.] comprising:  
2 a [variable-phase] substance [exhibiting a property] comprising a  
3 perovskite Mn oxide of Mn-containing perovskite represented by  $A_{1-x}B_xMnO_3$ ,  
4 where A is at least one of La, Pr, Nd and Sm rare earth ions, and B is at least one  
5 of Ca, Sr and Ba alkaline rare earth ions, wherein said substance exhibits  
6 emissivity characteristics of an insulator [in] at a relatively high temperature and  
7 emissivity characteristics of a metal at a [high temperature phase and a property of  
8 metal in a] relatively low temperature [phase], [and radiating] said substance  
9 having a [great amount of heat] relatively low emissivity at the relatively low  
10 temperature [in a high temperature phase] and a [small amount of heat in the low]  
11 relatively high emissivity at the relatively high temperature [phase controls a  
12 temperature of]; and  
13 an object having said substance affixed directly thereto, wherein said  
14 substance controls the temperature of said object.

1 4 (Twice Amended). A thermal control device as claimed in claim [3] 1, wherein  
2 said [variable-phase] substance is affixed to the object by powder coating,  
3 deposition, crystalline adhesion or adhesion of a film formed of a [variable-phase]  
4 substance containing a binder.

1 5. (Twice Amended). A thermal control device as claimed in claim 4, further  
2 comprising either one of a plate and a film mounted on said [phase-variable]

B<sup>2</sup>  
3 substance for transmitting infrared rays to said substance and reflecting visible  
4 rays away from said substance.

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1 11 (Twice Amended). A thermal control device [as claimed in claim 1,]  
2 comprising:  
3 [wherein said variable-phase] a substance [comprises] comprising an  
4 oxide of Cr-containing corundum vanadium, wherein said substance exhibits  
5 emissivity characteristics of an insulator at a relatively high temperature and  
6 emissivity characteristics of a metal at a relatively low temperature, said substance  
7 having a relatively low emissivity at the relatively low temperature and a  
8 relatively high emissivity at the relatively high temperature; and  
9 an object having said substance affixed directly thereto, wherein said  
10 substance controls the temperature of the object.

1 12 (Twice Amended). A thermal control device as claimed in claim 11, wherein  
2 said [variable-phase] substance comprises  $(V_{1-x}Cr_x)_2O_3$ .

1 13 (Twice Amended). A thermal control device as claimed in claim 12, wherein  
2 said [variable-phase] substance is affixed to the object by powder coating,  
3 deposition, crystalline adhesion or adhesion of a film formed of a [variable-phase]  
4 substance containing a binder.

1 14 (Twice Amended). A thermal control device as claimed in claim 13, further  
2 comprising either one of a plate and a film mounted on said [phase-variable]  
3 substance for transmitting infrared rays and reflecting visible rays.

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1 16. (Twice Amended). A thermal control device comprising: [as claimed in claim  
2 1, wherein said]  
3 a variable-phase substance [comprises] comprising  $(V_{1-x}, Cr_x)_2O_3$ , wherein  
4 said substance exhibits emissivity characteristics of an insulator at a relatively  
5 high temperature and emissivity characteristics of a metal at a relatively low  
6 temperature, said substance having a relatively low emissivity at the relatively low  
7 temperature and a relatively high emissivity at the relatively high temperature; and  
8 an object having said substance affixed directly thereto, wherein said  
9 substance controls the temperature of said object.

1 17 (Twice Amended). A thermal control device its claimed in claim 16, wherein  
2 said [variable-phase] substance is affixed to the object by powder coating,  
3 deposition, crystalline adhesion or adhesion of a film formed of a [variable-phase]  
4 substance containing a binder.

1 18. (Twice Amended). A thermal control device as claimed in claim 17, further  
2 comprising either one of a plate and a film mounted on said [phase-variable]  
3 substance for transmitting infrared rays and reflecting visible rays.

Please add new claim 30 as follows:

30. A thermal control device as recited in claim 1, wherein a transition  
temperature of said substance depends upon a value of x in the perovskite Mn  
oxide of Mn-containing perovskite represented by  $A_{1-x}B_xMnO_3$  causes a transition  
temperature.